IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No.:	10/672,043	Confirmation No.: 1099
Appellant(s):	Daniel White SEXTON et al.	
Filed:	September 26, 2003	
Art Unit:	2416	
Examiner:	Pawaris Sinkantarakorn	
Docket No.:	125836-1	
Customer No.:	06147	
Title:	HIGH PERFORMANCE NETWORK COMMUNICATION DEVICE AND METHOD	

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REPLY BRIEF UNDER 37 CFR § 1.193(b)(1)

This Reply Brief is filed in response to the Examiner's Answer dated August 5, 2010, the Examiner's Answer being in response to an Appeal Brief filed January 5, 2010. This Reply Brief addresses various points raised by the Examiner's Answer.

7. ***Argument.***

As explained in the Appeal Brief at pages 3-13, Claims 1-20 are patentably distinct from U.S. Patent No. 5,953,340 to Scott *et al.* (hereinafter "*Scott*"), and thus, *Scott* fails to anticipate Claims 1-20. Accordingly, Appellants respectfully request that the rejections of Claims 1-20 be reversed.

In reply to the Examiner's Answer, Appellant again submits that the cited reference fails to teach or suggest the recited features of the claimed invention. The Examiner's Answer is, in large part, simply a repeat of the same recitations used in the final Official Action in rejecting the currently pending claims. As such, Appellants respectfully submit that since the Appeal Brief pointed out the flaws in the Examiner's reasoning with respect to these rejections, no further discussion of the issues previously addressed need be presented herein. Rather, Appellants will direct the comments presented herein toward responding to the specific assertions from the "Response to Argument" section of the Examiner's Answer (pages 8-12).

10. ***Response to Argument.***

The Examiner's Answer identified several of Appellants' arguments of section 7 of the Appeal Brief and provided responses to these arguments presented by the Appeal Brief. These arguments will be addressed below in the order in which they were presented in the Examiner's Answer for the sake of consistency.

Examiner's Response 1.

The Examiner's Answer states

> **Regarding claim 1**, the Appellants argue that Scott does not disclose "a first portion communicably connectable to a first point and a second point and configured to manage collisions" and a "second portion connectable, in parallel with the first portion, to the first point and the second point, the second portion being configured to transmit free of collision management" as recited in independent claim 1.
>
> **In response to Appellants' argument**, the Examiner respectfully disagrees with the argument above.

See Examiner's Answer, pp. 9 and 10. The Examiner's Answer then goes on to paraphrase various portions of *Scott* related to the devices 151 and 152 of Figs. 4 and 5, respectively, of *Scott*. The Examiner's Answer does not specify how the disclosure of *Scott* relates to the language of the claims of the present application. As such, Appellants simply note that the cited passages from *Scott* have been considered and addressed in the Reply Brief, and that nothing in the Examiner's Answer serves to refute any of Appellants' arguments on this point.

Examiner's Response 2.

The Examiner's Answer also states

> Scott discloses that an external connection between the first and second domains, such as with a bridge device or the like, provides substantial operation improvement since the first domain is not bogged down with extraneous traffic from the second domain (see column 10 lines 13-17, underline added).
>
> * * *
>
> Furthermore, devices in the first domain operate in switch mode thereby significantly reducing extraneous traffic for the first domain 14 (see column 10 lines 5-12, underline added). Thus, Scott discloses that the bridge device or the like is the adaptive networking device 152 including a switch module, not the bridge ports in Figure 2 of Scott.

See Examiner's Answer, p. 10. Appellants reproduce the cited phrases from *Scott* in their original order:

> The adaptive networking device 152 provides substantial improvement over the adaptive networking device 12 without a significant increase in cost. Data devices operating according to either the first domain 14 or the second domain 16 are coupled to the appropriate module 172 or 176, respectively, as described previously. Furthermore, devices in the first domain 14 operate in switch mode thereby significantly reducing extraneous traffic for the first domain 14. An external connection between the first and second domains, such as with a bridge device or the like, provides substantial operation improvement since the first domain 14 is not bogged down with extraneous traffic from the second domain 16.

See Scott, col. 10, ll. 5-17. Moving through this passage, *Scott* indicates that devices either in the first or second domain are "coupled to the appropriate module 172 or 176, respectively." So, devices are either coupled to the module 172 (if disposed in the first domain) or the module 176 (if disposed in the second domain), but not both. *Scott* goes on to indicate that extraneous traffic is reduced for the first domain because "devices in the first domain 14 operate in switch mode;" that is, devices in the first domain transmit data to the switch module 172, which communicates the data only to the intended device within the first domain.

Finally, *Scott* states that an "external connection between the first and second domains, such as with a bridge device or the like, provides substantial operation improvement [over the adaptive networking device 12 of Fig. 2] since the first domain 14 is not bogged down with extraneous traffic from the second domain 16." In other words, communications from devices in the second domain and intended for a device in the first domain can be transmitted via the module 176 (as demonstrated above, all devices in the second domain are connected only to module 176) to "a bridge device or the like," and then on to the module 172, which module 172 can direct the communication to only the specific intended device (since the module operated in switch mode) rather than to all of the devices in the first domain (as would be the case if the module 172 operated in repeater mode, as in the device 12 of Fig. 2).

Overall, Appellants respectfully submit that there is nothing in *Scott* to support the statement in the Examiner's Answer that "Scott discloses that the bridge device or the like is the adaptive networking device 152 including a switch module, not the bridge ports in Figure 2 of Scott," and that this statement is an inaccurate characterization of *Scott*.

The Examiner's Answer goes on to state

> As a matter of fact, Scott discloses that, although not shown in Fig. 4, the adaptive networking device 151 may optionally include the uplink ports 36 a and 36b and the bridge ports 38a and 38b, if desired (see column 8 lines 37-40, underline added). Thus, bridge ports 38a and 38b are not necessary for the adaptive networking device 151,152.

See Examiner's Answer, p. 11.

Appellants agree with this characterization of *Scott*, but do not see the relevance of this statement to the argument. Indeed, *Scott* may exclude the uplink ports 36a-b and bridge ports 38a-b, for example, where, for example, communications from one domain to another are prohibited, or where, as in the embodiment of the adaptive networking device 153 of Fig. 6 (which is described as an embodiment of the adaptive networking device 151 of Fig. 4), the adaptive networking device includes a "converter" (174) that enables communications from one domain to another. This does not change the fact that communications between different

domains are not possible without the use of bridge ports, a converter, or some other device specially configured to enable the conversion of data between a first protocol (associated with the first domain) and a second protocol (associated with the second domain). In fact, if such inter-domain communications were possible in *Scott* without the use of bridge ports, a converter, etc., there would appear to be no need for such constructs at all in the systems of *Scott*.

The Examiner's Answer also cites various passages from *Scott*, concluding with

> Thus, Scott discloses that message from first to second domain traverse the following paths: first domain device -> switch module 172 -> second domain device or first domain device -> repeater module 176 -> second domain device.

See Examiner's Answer, p. 12.

Appellants respectfully submit that this interpretation of *Scott* cannot be correct. First, as discussed above, *Scott* states that "data devices operating according to either the first domain 14 or the second domain 16 are coupled to the appropriate module 172 or 176, respectively." *See Scott*, col. 10, ll. 7-10. Thus, because all devices in the first domain are only connected to the module 172 (and not the module 176), a communication from a device in the first domain cannot traverse the path *first domain device* → *repeater module* 176 → *second domain device* (incidentally, such a communication also cannot traverse the path *first domain device* → *switch module* 172 → *second domain device*, as the second domain device is not connected to the switch module 172, but only to the repeater module 176).

Second, as discussed above and previously, the first and second domains operate using first and second data rates. *See Scott*, col. 4, ll. 46-48. Communications between domains require a data conversion process. *See Scott*, col. 6, ll. 9-22 and col. 10, ll. 36-41. Such conversions can be performed by bridges or by a conversion module. *Id.* Specifically, *Scott* presents an embodiment of an adaptive networking device (Fig. 6, 153) that includes the switch module 172, the repeater module 176, and a conversion module 174 therebetween. If communications between the devices in the first domain and the second domain were possible via either of the switch module 172 or the repeater module 176, it is not clear what purpose

would be served by including a conversion module 174 at all, and it is apparent that neither the switch module 172 nor the repeater module 176 includes the capability of converting data rates.

Finally, the Examiner's Answer states

> According to the embodiment of Figure 4 and 5 of Scott, switch module 172 is designed to forward a message to only one or more of the intended ports. On the other hand, repeater module 176 is designed to forward a message to all of the remaining ports. According to the Appellants' argument, a message traverses the following path: first domain device -> switch module 172 -> repeater module ->second domain device. If the data packets are forwarded to the repeater module 176 from the switch module 172, the repeater module 176 will perform its operation, which is to re-transmit data sourced from any of the data devices connect to one port to all other ports associated with the second domain (see column 9 lines 12-15). However, the statement contradicts with the disclosure of Scott because Scott discloses the switch module transmitting to port P(n-2) and thus to network 20 only. The messages transmitted from the switch module 172 do not traverse through the repeater module 176. Therefore, the switch module 172 is connected in parallel with the repeater module 176.

See Examiner's Answer, p. 12.

Reproducing the relevant portion of *Scott*

> The adaptive networking device 151 operates the first domain 14 in a switch mode rather than in a repeater mode as described above for the adaptive repeater 12. In this manner, the adaptive networking device 151 examines source and destination media access control (MAC) addresses of each data packet received from data devices or networks 18, 20, 22, etc. in the first domain 14 and re-transmits the data packet to one or more of the other ports of the adaptive networking device 151. If a destination address is unknown, the data packet is broadcast to the remaining ports, if any, associated with the first domain 14. Eventually, the switch function "learns" the port associated with each destination address and sends the packet to the appropriate port. For example, data packets

> from the network 18 transmitted to the adaptive networking device 151 and intended for a data device in network 20 are re-transmitted by the adaptive networking device 151 to port P(n-2) and thus to the network 20 only. In contrast to the operation of the adaptive repeater 12, these data packets intended for the network 20 are not transmitted to any other port of the adaptive networking device 151. Multi-cast or broadcast packets intended for several data devices in the first domain 14 are sent only to ports coupled to the addressed data devices rather than to all other ports associated with the first domain 14.
>
> In this manner, the adaptive networking device 151 substantially enhances the performance of the first domain 14. Operation in switched mode rather than "shared" mode, as described above for the adaptive repeater 12, reduces the amount of data transmitted to each of the ports associated with the first domain 14 by not repeating each data packet to every other port as is the case for a repeater. This results in a reduced amount of collisions during operation, which increases the effective rate of data transfer.

See Scott, col. 8, l. 43-col. 9, l. 9 (emphasis added). The highlighted statements in the above passage make clear that all of the above discussion refers only to the handling by the adaptive networking device 151 of communications within the first domain (rather than between the first domain and the second domain). A such, the argument by Appellants that communications in *Scott* from a device in the first domain to a device in the second domain traverse the path *first domain device* → *switch module* 172 → *bridge* or *conversion module* → *repeater module* 176 → *second domain device* does not contradict the disclosure of *Scott*, as alleged in the Examiner's Answer, but is wholly consistent with *Scott*, and is indeed the most reasonable understanding of *Scott*.

For all the reasons provided above and in the Appeal Brief, *Scott* fails to teach or suggest "a first portion communicably connectable to a first point and a second point and configured to manage collisions" and a "second portion connectable, in parallel with said first portion, to said first point and said second point, said second portion being configured to transmit free of collision management," as recited, in one form or another, by each of independent Claims 1, 10, and 18.

CONCLUSION

For at least the foregoing reasons, as well as those presented in the Appeal Brief, Appellants respectfully request that the rejections be reversed.

It is not believed that extensions of time or other fees are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefor (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 07-0868.

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